

This product line is designed and manufactured for long term storage of various biological products, including viruses, germs, erythrocytes and leucocytes. Applications can be found in blood banks, hospitals, epidemic prevention services, research institutes, biological engineering institutes, laboratories in electronic and chemical plants.



Advantages

- World leading energy-efficient
- Hydrocarbon refrigeration system
- Slim cabinet design
- Reliable sample protection
- Malfunction alarms
- Excellent insulation performance



Insulation and System Design

- Special V-I-P (Vacuum Insulation Panel) insulation system reduces the heat gain by 25%
- High efficiency HC refrigeration system improves the overall efficiency by 45%
- Four individual insulated inner doors reduce the cold air loss to the minimum
- Heated Pressure Equalization Port makes re-accessing the unit fast
- About 50 dba sound level

Safe and Reliable Storage

- Superior temperature uniformity
- Dependable fans, compressors and other system related components

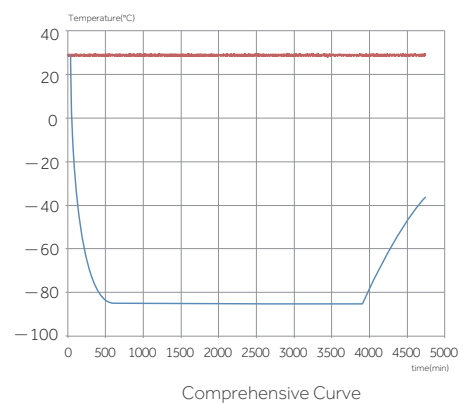
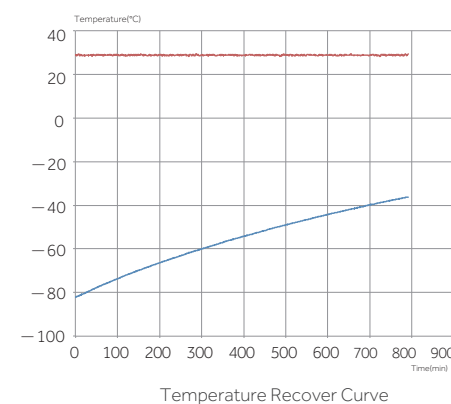
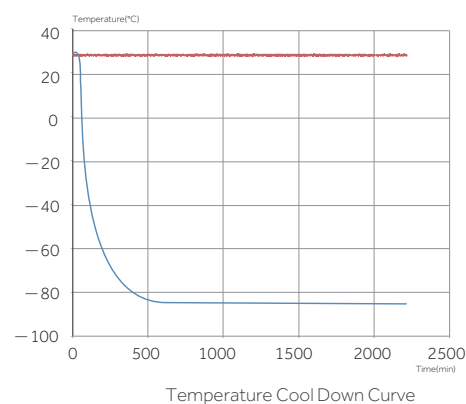
Alarms (Visual and Audible)

- Adjustable High/Low temperature alarm
- Sensor error
- Low battery
- Door ajar
- Power failure
- Hot condenser
- High ambient
- Remote alarm contact

Extended Warm up Time During Power Failure

- Warm up time measures the time taken for temperature to rise up (from -80°C to -50°C) at 25°C ambient when the power is interrupted.
- Haier has the longest warm up time when compared with other major brands in the market.

TYPICAL PERFORMANCE CHARACTERISTICS AT 25°C AMBIENT



4 Individual Removable Foam Inner Doors

- 4 individual inner doors can be opened independently to minimize frost buildup inside the chamber.
- Unique door seal design for the minimum loss of cold temperature during a door opening.
- Compatibility with existing racking system from competitors.
- Stainless steel handle to ensure proper strength for door latching.
- Some interior door handles have been upgraded to stainless steel for more comfortable door opening experience

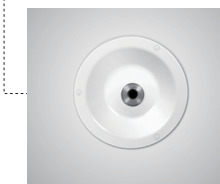


Excellent Doors Seals

- Total of five gaskets to safeguard the freezer temperature, including four seals for the exterior door, one for each inner door



- Optimized slideway design, easier to open and close the door



Pressure Equalization Port

- Heated port with spring-assisted mechanism to prevent icing on the vent.
- Allows re-accessing the freezer after initial door opening.
- Adopts chromium plating, rust-proof



Circular- chart Recorder (Optional)

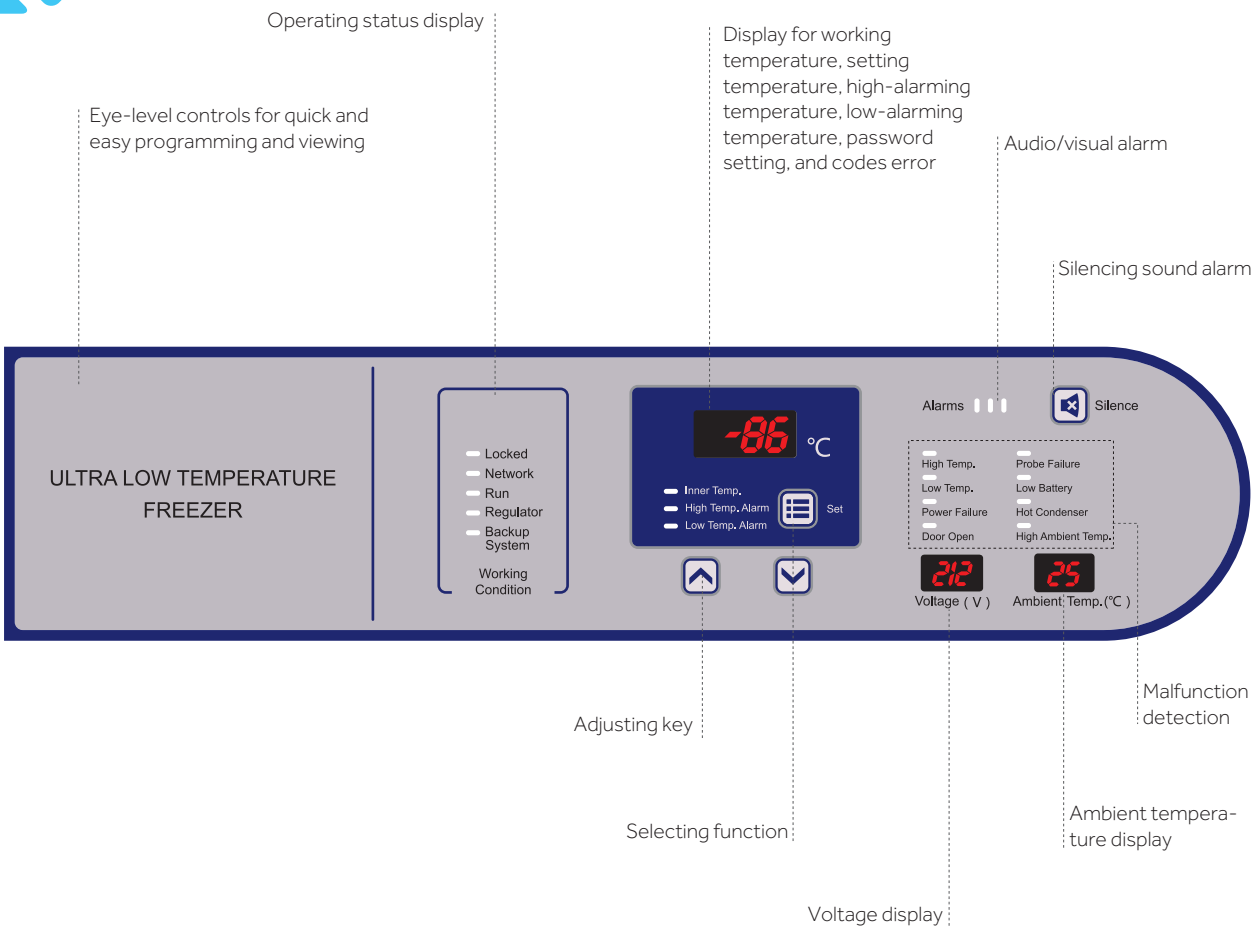
- Front-mounted.
- For independent temperature monitoring.



High Efficiency Refrigeration Components



Two port holes for ease of temperature monitoring



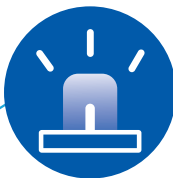
Specifications

Alarm	Alarm Triggering Condition
High Temperature	Temperature reaches the warm alarm limit
Low Temperature	Temperature reaches the low alarm limit
Power Failure	Equipment loses power
Door Ajar	Door opening time secedes set time, settable between 0 and 20 minutes
Sensor Error	E0.Ambient sensor fails E1.Condenser sensor fails E2.Main cabinet temperature control sensor fails E3.Heat exchanger sensor fails E4.Heat exchanger temperature fails
Low Battery	Battery capacity runs low or battery switch is not turned on
Hot Condenser	1. Condensers filter element is clogged 2. Ambient temperature is too high
High Ambient Temperature	Ambient temperature exceeds 32°C



Field proven reliability

- Unique insulated inner door design for four separate storage compartments to minimize frost buildup inside the chamber
- Specialized control system design for a well-balanced operation of cascade refrigeration system
- Positive field proven reliability record



Safety

- Malfunction alarms including high and low temperature, power failure, sensor error, clean -filter, and extremely high ambient
- Capable of producing two types of alarm outputs: audible buzzer and visible flashing light
- Multiple built-in system protection features including user-settable protection code for controls, user settable delay to start, voltage compensation system, and protection against extreme high voltages
- Door open feature standard and USB port for temperature data downloading standard on upright models
- Remote alarm contacts



Installation & Application

- Wide range operating voltage system from 185V to 260 V designed to allow units installed in areas with poor voltage condition
- Suitable for 10°C to 32°C ambient temperature
- Input voltage and ambient temperature shown simultaneously for ease of monitoring environmental conditions
- Robust door latch designed for secure door closing
- Compact casters for ease of maneuvering



Low sound level

- Specialized refrigeration system design using whisper quiet fan and compressors
- Freezer chassis designed to absorb vibration and sound



Energy saving

- Unique door seal design for the minimum loss of cold temperature during a door opening
- High performance VIP insulation panels to minimize cabinet heat gain and to improve temperature stability
- Patented cabinet insulation system designed for optimal performance of cold storage temperature and minimal frost buildup
- Unique design of independent insulated inner door systems for independent access of storage space to provide the maximum protection of stored samples



Key design features

- Microprocessor-controlled system designed for controllable range of -40°C to -86°C for cabinet space with 1°C increment
- Large LED display for cabinet temperature, set temperature, ambient temperature, and input voltage
- Settable high temperature and low temperature alarms
- Automatic clean-filter alarm and sensor error alert
- Adjustable storage shelf height
- Optional temperature recorder, storage racks and storage boxes



Specifications

Model		DW-86L338J			DW-86L338JA		DW-86L388J		DW-86L486E		DW-86L490J		DW-86L490JA		DW-86L578J			DW-86L578JA		DW-86L628E	
Technical Data	Cabinet Type	Upright			Upright		Upright		Upright		Upright		Upright			Upright			Upright		
	Climate Class	N			N		N		N		N			N			N				
	Cooling Type	Direct cooling			Direct cooling		Direct cooling		Direct cooling		Direct cooling			Direct cooling			Direct cooling				
	Defrost Mode	Manual			Manual		Manual		Manual		Manual			Manual			Manual				
	Refrigerant	HC			HC		HC		HC		HC			HC			HC				
	Sound level (dB(A))	50			50		49		50		50			50			49				
Performance	Cooling Performance (°C)	-86			-86		-86		-86		-86			-86			-86				
	Temperature Range (°C)	-40~-86			-40~-86		-40~-86		-40~-86		-40~-86			-40~-86			-40~-86				
Control	Controller	Microprocessor			Microprocessor		Microprocessor		Microprocessor		Microprocessor			Microprocessor			Microprocessor				
	Display	LED			LED		LED		LED		LED			LED			LED				
Electrical Data	Power Supply (V/Hz)	220~240/50	115/60	208~230/60	220~240/50	220~240/50	220~240/50	220~240/50	208~230/60	220~240/50	120/60	208~230/60	220~240/50	120/60	208~230/60	220~240/50					
	Electrical Current (A)	7.5	12	7.5	7.5	10	8	8	7.5	12	9	11									
	Power Consumption(kWh/24h) (set -80°C at 25°C ambient)	10	7.5	8.2	11	13	11.5	11.5	12	8.5	8.5	14									
Construction	Capacity (L/Cu.Ft)	338/11.9			388/13.7		486/17.1		490/17.3		578/20.4			626/22.1							
	Net/Gross Weight (approx)	kg	238/278			255/286		290/310		295/335		300/330			301/323						
		lbs	524.7/612.9			562.2/630.5		639.3/683.4		650.4/738.5		661.4/727.5			664.0/712.0						
	Interior Dimension (W*D*H)	mm	465*630*1165			465*716*1310		590*630*1310		590*630*1310		620*716*1310			760*630*1310						
		in	18.3*24.8*45.9			18.3*28.2*51.6		23.3*24.8*51.6		23.2*24.8*51.6		24.4*28.2*51.6			29.9*24.8*51.6						
	Exterior Dimension (W*D*H)	mm	823*900*1871			830*980*1980		953*900*1980		873*900*1980		903*980*1960			1035*900*1980						
		in	32.4*35.4*73.6			32.7*38.6*78.0		37.5*35.4*78.0		34.4*35.4*78.0		35.6*38.6*77.2			40.7*35.4*78.0						
	Packing Dimension (W*D*H)	mm	878*973*2027			893*1078*2135		998*998*2127		928*988*2127		990*1110*2070			1080*965*2150						
in		34.6*38.3*79.8			35.2*42.4*84.1		39.3*39.3*83.7		36.5*38.9*83.7		39.0*43.7*81.5			42.5*38.0*84.6							
Loading Quantities	Container load (20'/40'/40'H)	12/24/24			12/24/24		12/24/24		12/24/24		12/24/24			12/24/24							
Alarms	High/Low Temperature	Y			Y		Y		Y		Y			Y							
	Hot Condenser	Y			Y		Y		Y		Y			Y							
	Power Failure	Y			Y		Y		Y		Y			Y							
	Sensor Error	Y			Y		Y		Y		Y			Y							
	Low Battery	Y			Y		Y		Y		Y			Y							
	High Ambient Temperature	Y			Y		Y		Y		Y			Y							
	Door Ajar	Y			Y		Y		Y		Y			Y							
Accessories	Caster	Y			Y		Y		Y		Y			Y							
	Foot	Y			Y		Y		Y		Y			Y							
	Porthole	Y/2			Y/2		Y/2		Y/2		Y/2			Y/2							
	Shelves/Inner doors	3/2			3/2		3/4		3/4		3/4			3/4							
	USB Interface	Y			Y		Y		Y		Y			Y							
	Remote Alarm (Dry contacts)	Y			Y		Y		Y		Y			Y							
	5V Power Supply Port	Y			Y		Y		Y		Y			Y							
	Temperature Recorder	Optional			Optional		Optional		Optional		Optional			Optional							
	RS232/485 Port	Optional			Optional		Optional		Optional		Optional			Optional							
	CO ₂ Backup System	Optional			Optional		Optional		Optional		Optional			Optional							
	LN2 Backup System	Optional			Optional		Optional		Optional		Optional			Optional							
Certifications	CE	Y	/	Y	Y	Y	Y	/	Y	/	Y										
	UL	/	Y	/	/	/	/	Y	/	Y	Y										
	ENERGY STAR	/	/	/	/	/	/	/	Y	Y	/										

· Product appearance and specifications are subject to change without notice
· DW-86L338J/490J/578/628/959 stainless steel interior optional

Specifications



	Model	DW-86L728J			DW-86L728JA		DW-86L828J		DW-86L828JA		DW-86L100J		DW-86W100J		DW-86W420J		DW-86W420JA			
Technical Data	Cabinet Type	Upright			Upright			Upright			Upright			Chest			Chest			
	Climate Class	N			N			N			N			N			N			
	Cooling Type	Direct cooling			Direct cooling			Direct cooling			Direct cooling			Direct cooling			Direct cooling			
	Defrost Mode	Manual			Manual			Manual			Manual			Manual			Manual			
	Refrigerant	HC			HC			HC			HC			HC			HC			
	Sound level (dB(A))	50			50			51.5			46.8			49			50			
Performance	Cooling Performance (°C)	-86			-86			-86			-86			-86			-86			
	Temperature Range (°C)	-40~-86			-40~-86			-40~-86			-40~-86			-40~-86			-40~-86			
Control	Controller	Microprocessor			Microprocessor			Microprocessor			Microprocessor			Microprocessor			Microprocessor			
	Display	LED			LED			LED			LED			LED			LED			
Electrical Data	Power Supply (V/Hz)	220~240/50		120/60	208~230/60		220~240/50		208~230/60		220~240/50		120/60		220~240/50		220~240/50		208~230/60	
	Electrical Current (A)	10		18	10		10		10		3		6.5		4		7.5			
	Power Consumption (kWh/24h)	10.5		10.5	10.5		12		12		5.5		5.5		5		12.5			
Construction	Capacity (L/Cu.Ft)		728/25.7			828/29.2			100/3.5			100/3.5			420/14.8					
	Net/Gross Weight (approx)	kg	345/385			380/410			108/132			108/132			138/160			310/357		
		lbs	760.6/848.8			837.7/903.9			238/291			238/291			304.2/352.7			683.4/787.0		
	Interior Dimension (W*D*H)	mm	766*716*1310			870*716*1310			330*481*630			330*481*630			470*450*480			1367*462*652		
		in	30.2*28.2*51.6			34.3*28.2*51.6			13*19*25			13*19*25			18.5*17.7*18.9			53.8*18.2*25.7		
	Exterior Dimension (W*D*H)	mm	1049*980*1980			1145*980*1980			770*660*810			770*660*810			769*825*1120			2130*870*1020		
		in	41.3*38.6*78.0			45.1*38.6*78.0			30*26*32			30*26*32			30.3*32.5*44.1			83.9*34.3*40.2		
	Packing Dimension (W*D*H)	mm	1093*1048*2127			1240*1117*2110			844*724*860			844*724*860			845*855*1250			2200*890*1160		
in		43*41.3*83.7			48.8*44.0*83.1			33.2*28.5*33.9			33.2*28.5*33.9			33.3*33.7*49.2			86.6*35.0*45.7			
Loading Quantities	Container load (20'/40'/40'H)		12/20/20			8/20/20			44/88/88			44/88/88			12/24/48			6/12/24		
Alarms	High/Low Temperature		Y			Y			Y			Y			Y			Y		
	Hot Condenser		Y			Y			Y			Y			Y			Y		
	Power Failure		Y			Y			Y			Y			Y			Y		
	High/Low Voltage		/			/			Y			Y			/			/		
	Sensor Error		Y			Y			Y			Y			Y			Y		
	Low Battery		Y			Y			Y			Y			Y			Y		
	High Ambient Temperature		Y			Y			Y			Y			Y			Y		
	Door Ajar		Y			Y			Y			Y			Y			Y		
Accessories	Caster		Y			Y			Y			Y			Y			Y		
	Foot		Y			Y			Y			Y			Y			Y		
	Porthole		Y/2			Y/2			Y/1			Y/1			Y/1			Y/1		
	Shelves/Inner doors		3/4			3/4			1/2			1/2			-/1			-/3		
	USB Interface		Y			Y			Y			Y			Y			Y		
	Remote Alarm		Y			Y			Y			Y			Y			Y		
	5V Power Supply Port		Y			Y			Y			Y			N/A			N/A		
	Temperature Recorder		Optional			Optional			/			/			Optional			Optional		
	Rs232/485 Interface		Optional			Optional			-/Y			-/Y			Optional			Optional		
	CO ₂ Backup System		Optional			Optional			Optional			Optional			Optional			Optional		
	LN ₂ Backup System		Optional			Optional			Optional			Optional			Optional			Optional		
Certifications	CE		Y	/	/	Y	/	Y	/	Y	/	Y	/	Y	/	Y	/	Y	/	
	UL		/	Y	Y	/	Y	/	Y	/	/	Y	Y	/	/	/	/	Y	Y	
	ENERGY STAR		/	Y	/	/	Y	/	Y	/	/	/	/	/	/	/	/	/	/	